

CLAIMS

What is claimed is:

1. A profile rail for the support of panel-like elements (7), in particular for the insertion assembly of ceiling panels for grid ceilings, comprising:

a base body (25) that is formed at least regionally as a T section and that includes an elongate web (29) as well as a bottom chord (28), which is arranged along a longitudinal edge (20) of the web (29) and includes two bottom chord sections (26, 27), each of which extend from the web (29) substantially in opposite directions, with the bottom chord (28) being formed by a bent-over portion of the web (29) and the side of the bottom chord (28) disposed remote from the web being provided with a screening strip (32), wherein a plurality of apertures (30) are formed in the web (29), at least one of the bottom chord sections (26) is formed by material sections (23) of the web (29) folded out of the apertures (30) and the web (29) is essentially made in one layer over its total area.

2. A profile rail in accordance with claim 1, wherein one of the bottom chord sections (26) is formed by a plurality of material sections (23) of the web (29) folded out of the apertures (30) and the other bottom chord section (26) is substantially formed by a one-piece bent-over portion of the web (29).

3. A profile rail in accordance with claim 1, wherein both bottom chord sections are respectively alternately formed regionally by material sections of the web folded out of the apertures and by one-piece bent-over portions of the web adjoining them, with each part region of the one bottom chord section

formed as a one-piece bent-over section lying opposite to a part region of the other bottom chord section formed by material sections folded out of the apertures.

4. A profile rail in accordance with claim 1, wherein the apertures (30) each have a straight edge (14) extending substantially parallel to a longitudinal edge (16) of the web (29).

5. A profile rail in accordance with claim 1, wherein the apertures (30) are substantially made in rectangular or trapezoidal form.

6. A profile rail in accordance with claim 1, wherein outwardly lying longitudinal edges (16, 33) of the two bottom chord sections (26, 27) extend substantially parallel to one another.

7. A profile rail in accordance with claim 1, wherein the two bottom chord sections (26, 27) have substantially the same width.

8. A profile rail in accordance with claim 1, wherein the bottom chord (28) and the web (29) are substantially perpendicular to one another.

9. A profile rail in accordance with claim 1, wherein a radius (r) of the bent-over portion is smaller than 3 mm, in particular smaller than 2 mm, and is preferably smaller than 1 mm.

10. A profile rail in accordance with claim 1, wherein the base body (25) is produced from a uniform strip of material, in particular from one of a strip of metal and a strip of sheet metal (11).

11. A profile rail in accordance with claim 1, wherein the web (29) is substantially flat.

12. A profile rail in accordance with claim 1, wherein the thickness of one of the web (29) and the bottom chord (28) amounts to approximately between 0.1 and 1.5 mm, preferably approximately between 0.2 and 1 mm, in particular approximately between 0.3 and 0.8 mm.

13. A profile rail in accordance with claim 1, wherein the screening strip (32) is rolled onto the bottom chord (28) or is adhesively bonded to it and/or is laminated at its visible surface and/or engages around the outwardly disposed longitudinal edges (16, 33) of the bottom chord (28).

14. A profile rail in accordance with claim 1, wherein a top chord (35) is provided at the longitudinal edge (34) of the web disposed opposite the bottom chord (28).

15. A profile rail in accordance with claim 14, wherein the top chord (35) is made for the coupling of fastening elements (9, 10), in particular of suspension elements, to the profile rail.

16. A profile rail in accordance with claim 14, wherein the top chord (35) is made as a hollow section.

17. A profile rail in accordance with claim 14, wherein the top chord (35) is made in corresponding manner to the bottom chord (28).

18. A profile rail in accordance with claim 14, wherein the top chord (35) includes a longitudinal edge (38) which is connected to the web (29), in particular to the longitudinal edge (34) of the web (29).

19. A profile rail in accordance with claim 18, wherein the longitudinal edge (38) of the top chord (35) is connected to the web (29) by stitching.

20. A profile rail in accordance with claim 1, wherein additional fastening apertures (31) are formed in the web (29) for fastening elements, in particular for suspension elements.

21. A profile rail in accordance with claim 1, wherein the apertures (30) have substantially the same width in the longitudinal direction of the web (29).

22. A profile rail in accordance with claim 1, wherein a width of the apertures (30) in the longitudinal direction of the web (29) is substantially the same as a width of the material sections (36) of the web (29) disposed in the longitudinal direction of the web (29) between the apertures (30).

23. A profile rail in accordance with claim 1, wherein reinforcement elements (37), in particular reinforcement beads, are made in the web material.

24. A profile rail in accordance with claim 23, wherein the reinforcement elements (37) are made in the material sections (36) of the web (29) disposed between the apertures (30).

25. A profile rail in accordance with claim 23, wherein at least two reinforcement elements (37) are each formed in at least some of the material sections (36) disposed between two apertures (30) and extend outwardly in opposite directions, starting from the material section (36).

26. A method for the manufacture of a profile rail that supports panel-like elements (7), in particular for the insertion assembly of ceiling panels for grid ceilings, comprising:

providing an elongate strip of material (11), in particular one of a strip of metal and a strip of sheet metal, with a plurality of elongate incisions (12), with the two free ends (17, 18) of the incisions (12) each being arranged on a straight line extending substantially parallel to the longitudinal axis (19) of the strip of material (1) and forming a bending line (20); and

bending over the strip of material (11) along this bending line (20).

27. A method in accordance with claim 26, wherein the incisions (12) are made in U shape, in particular with a straight-line base (14) and straight limbs (13, 15) preferably extending perpendicular thereto, or in trapezoidal form.

28. A method in accordance with claim 26, wherein the height (21) of the incisions (12), which in each case is defined by the perpendicular spacing from the bending line (20) to the point of the respective incision (12) disposed furthest away, is substantially of the same size.

29. A method in accordance with claim 26, wherein the height (21) of the incisions (12), which in each case is defined by the perpendicular spacing from the bending line (20) to the point of the respective incision (12) disposed furthest away, is substantially the same as the spacing (32) between the bending line (20) and the longitudinal edge (16) of the strip of material.

30. A method in accordance with claim 26, wherein the incisions (12) are each produced on the same side of the bending line (20).

31. A method in accordance with claim 26, wherein the strip of material (11) is bent over by approximately 90°.

32. A method in accordance with claim 26, wherein the incisions (12) are produced by a rotation cutting method or by a laser cutting method or by a stamping procedure.